


1994

## Part-time Courses 1994-95

City of Dublin Vocational Education Committee

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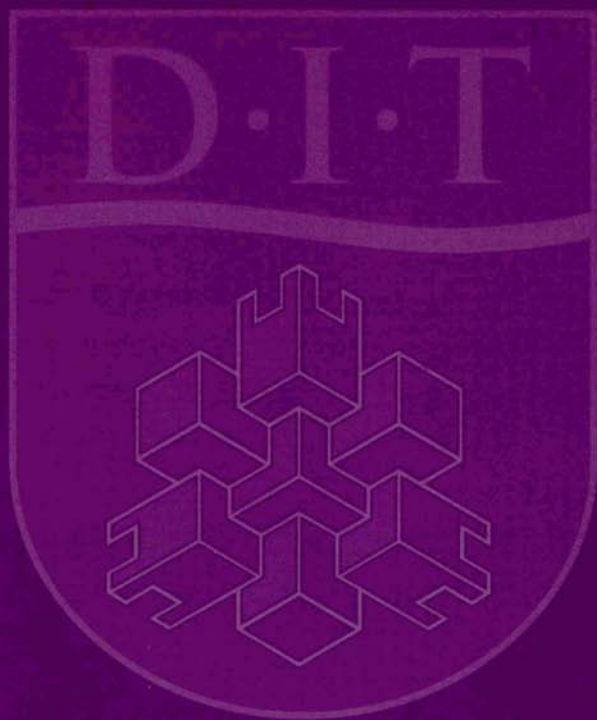
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DUBLIN INSTITUTE  
*of* TECHNOLOGY

*Institiúid Teicneolaíochta Bhaile Átha Cliath*

PART-TIME COURSES 94-95



BOLTON STREET  
SRÁID BHOLTÚIN



## CONTENTS

### Course

### Page

#### SURVEYING & BUILDING

B2	Construction Technology Certificate/Diploma	6
B4A	Diploma/Degree in Construction Economics	6
B3	Professional Course in Surveying and Construction	7
B5	Graduate Diploma in Arbitration Law	7
B6	Graduate Diploma in International Arbitration Law	8
B7	Graduate Diploma in Planning & Development Economics	9

#### ENGINEERING TECHNOLOGY

B40	Foundation Course in Engineering	10
B41	Graduate Courses in Engineering	10
B43D-E	Mechanical Engineering Technician Cert.& Diploma Course	12
B45D-E	Mechanical Engineering Technician Cert.& Diploma Course	14
B44D-E	Building Services Engineering Technician Cert. & Diploma Course	15
B47D	Mechanical Engineering Technician Course	16
B47E	Mechanical Engineering Technician Course (Evening)	16
B48	Society of Manufacturing Engineers (Part 1)	17
B54	Structural Engineering Design Course	18
B57	Industrial Management Cert.& Diploma Course	19
B58	Refrigeration Engineering Technician Course	19
B59	Engineering Short Course Programme	20
B61	Engineering Maintenance Technology Certificate Course	20

#### COMPUTING

B70	Introductory Programming	21
B71	Computer Programming	22
B72	Advanced Programming	23
B81	AutoCAD	24
B82	AutoCAD Three Dimensional	24
B83	AutoCAD Customisation	25
B91	Word Processing and Desk Top Publishing	26
B92	Data Bases and Spreadsheets	26

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## CONTENTS - CONTINUED

### CONSTRUCTION

B102	Decorative Plasterwork	28
B104	Colour & Design in Building Work	29
B106	Signwork—Advanced	29
B300	Building Maintenance	29
B107	Furniture Design and Construction	30
B111	Cabinetmaking/Chairmaking	31
B117	Woodturning	31
B118	Institute of Wood Science Certificate	31
B119	Building Technology	32
B120	Craft Technician Course in Building	33
B121	Carpentry and Joinery—Advanced	34
B122A	Woodcutting Machinists Course	34
B122B	Woodcutting Machinists Course (CNC)	35
B123	Short Courses in Welding Processes	35
B123A	Welding—Metal Arc and Oxy-acetylene	35
B123B	Welding—Gas Shielded Arc	36
B123C	Welding—Advanced Plate and Pipe	36
B123D	Pipe Fabrication	36
B123E	Light Gauge Fabrication	37
B123F	Welding Repair & Maintenance	37
B125B	Art Metal Casting	38
B129A	Sheet Metal Work	38
B129B	Sheet Metal Work-Updating of Skills	38
B130	Metal Fabrication	39
B131	Plumbing	39
B132	Craft Technician Certificate in Plumbing	39
B133	Tendering and Estimating Practice (Mechanical Services Industry)	40
B134	Heating and Plumbing Merchants/Providers	40
B135	Domestic Heating Engineers Course	41
B136	Craft Technicians Certificate in Gas Technology	41
B137	Efficient Energy Practice	41
B300	Building Maintenance	42

### ENGINEERING

B138	Engineering Quality Assurance	43
B139	Quality Assurance Management	43
B140	Engineering Systems Maintenance	44
B141 A-F	Computer Aided Engineering	44
B142	Engineering Craft Studies—Inspection	46

## CONTENTS - CONTINUED

### TRANSPORT ENGINEERING

B150	Flight Operation Officer (Dispatcher Course)	46
B151	Production Planning Course (IATA)	46
B152 A-V	Aeronautical Maintenance Engineer's Licences	47
B153	Jet Engine Overhaul Procedures	48
B154	Aeronautical Engineering Craft Studies	48
B155 B-K	Basic Aeronautical Engineering Certificates	49
B156A	Private Aircraft Pilot's Licence	49
B156B	Private Pilot's Licence (Instrument Rating)	49
B165	Motor Cycle Mechanics Course	50
B170	Motor Vehicle Parts Personnel	50
B173A	Motor Vehicle Diagnostic Techniques	50
B173B	Compressed Air Systems and Fuel Injection in C.I. Engines	51
B173C	Motor Vehicle Craft Studies Electricity/Electronics	51
B174	Auto Engineering Technician Course	51
B176	Automobile Engineering Updating Courses	52
B177	Technological Certificate in Automobile Engineering	52
B178A	Motor Industry Management Certificate	53
B178B	Motor Industry Management Higher Certificate	53
B179	Road Transport Studies	53

### PRINTING & GRAPHIC COMMUNICATIONS

B180	Book and Archive Restoration	54
B182	Print Finishing	54
B183	Introduction to Printing Technology	54
B184	Cost Accountancy for Printers	55
B185	Estimating for Printers	55
B186	Paper Technology	55
B187	Design for Print	55
B188	Introduction to Management-Graphic Industry	56
B191	Book Binding and Print Finishing Retraining	56
B192	Lithography and Photo Lithography Retraining	56
B193	Advanced Lithographic Printing & Platemaking	56
B197	Desk Top Publishing	57
B200	Graphic Communications-Screen Printing	57



## FOREWORD

*I am very pleased to launch this new DIT initiative involving the production of a co-ordinated series of booklets that provide information about the part-time and apprenticeship courses which may be offered by the Institute in its different centres in the 1994/95 session. Since the establishment of the first of our Colleges in Kevin Street in 1887 there has been a special commitment to part-time education, and over the years many thousands of young people (and the not so young!) have benefited from the wide range of courses that has been developed. Today some 15,000 part-time and apprentice students are enrolled in the Colleges of the Institute, which is by far the largest provision being made in this area by any Irish higher education institution.*

*As part of the process of implementing the Dublin Institute of Technology Act 1992, DIT is in the process of a reorganisation, leading to an overall integrated structure, which hopefully will enable us to offer a wider range of courses and provide a better service to our students. It seems likely that most of the disciplines will continue to be based in their present sites, at least for the time being, with one major exception - the activities of the former College of Commerce in Rathmines will transfer to a new purpose built 10,000 square metre college in Aungier Street as from September 1994.*

*We are very aware of the rapid pace of technological change and the need for people to keep abreast of new developments or prepare for new career directions. We hope that you will find a course that is of interest to you in DIT. If not, you might contact the College Department associated with the broad discipline area and make them aware of your area of interest or needs. We are anxious to respond as comprehensively as possible to demands, having regard to available resources, and many of our present courses were developed in response to such expressions of interest. Enquiries from employers, professional bodies and other groups are also welcome in this context.*

*If you do decide to pursue a part-time or apprenticeship course in DIT we hope that you will both enjoy and benefit from your time with us.*

**Dr. Brendan Goldsmith.**  
President.

## INTRODUCTION

*The College has a strong commitment to providing a wide range of part-time day and/or evening courses relating to its main specialisations in Construction, Engineering and Printing disciplines and associated areas. The aim of these courses is to provide both young people, and the not so young with opportunities to achieve worthwhile qualifications and to enhance and broaden their existing qualifications base.*

## METHOD OF APPLICATION AND ENROLMENT

*With the exception of the Computing courses B70, B71, B72, B81, B82, B83, B91 and B92 application and admission to part-time day and evening courses is by personal attendance for interview at the College between 6.30 p.m. and 8.00 p.m. in accordance with the following schedule.*

### **Monday,**

**12th September:** Enrolment for all part-time and evening courses provided by the College except courses in the following: Printing, Automobile and Aeronautical Engineering.

### **Wednesday,**

**14th September:** Enrolment for courses in Printing, Automobile and Aeronautical Engineering

### **Thursday,**

**15th September**

**and**

**Friday,**

**16th September**

Enrolment for all part-time day and evening courses in which vacancies remain

*Prior application or contact with the College is not necessary. Candidates are encouraged to bring with them evidence of existing qualifications and employment together with the specified tuition fee to enable them to complete the enrolment if they are acceptable and permitted to do so. Classes are generally scheduled to commence during the week commencing September 26th and those who have enrolled will be expected to report for classes in accordance with the schedule which will be available.*

Applications for admission to the Computer courses must be made on the official form available on request from the





B2

### CONSTRUCTION TECHNOLOGY CERTIFICATE/ DIPLOMA PART-TIME

This day release course is similar to the wholtime Construction Technology Certificate/Diploma course (DT114) and leads to the award of the Construction Technology Certificate/Diploma. Classes are scheduled on one day and two evenings per week over a period of four years. Entry to this course is open to those holding:

- (a) The secondary schools Leaving Certificate in at least five subjects including Mathematics and English or an equivalent qualification.
- (b) Appropriate employment in the Construction Industry.

Course fee

<i>First Year</i>	£330
<i>Subsequent Years</i>	£230

***Department in Charge: Surveying and Building Technology.***

B4A

### DIPLOMA/DEGREE IN CONSTRUCTION ECONOMICS PART-TIME

This day release course is similar to the corresponding wholtime course (FT02) and leads to the award of a Diploma/Degree in Construction Economics. Classes are scheduled on one day and two evenings per week over a period of six years. The academic entry qualifications to the First Year of the course are similar to those for FT110. Candidates holding relevant technician qualifications at an appropriate level may be eligible for exemptions from one or more years of the course. Candidates must be in appropriate employment in the Construction Industry.

Course fee

£640

***Department in Charge: Surveying & Building Technology.***



B3

### PROFESSIONAL COURSE IN SURVEYING AND CONSTRUCTION STUDIES

This evening course assists, students who hold Intermediate Level qualifications in the construction and surveying fields, in progress ing to full professional qualifications of appropriate institutions. Students may attend classes up to two evenings per week depending on their choice of subjects.

Entry  
Qualifications

N.C.E.A. Diploma in Construction Studies, C.T.D., Member 1 Examination of C.I.O.B. or R.I.C.S., Part 1 examinations.

Course fee

£330

***Department in Charge: Surveying and Building Technology.***

B5

### GRADUATE DIPLOMA IN ARBITRATION LAW

The objectives of this one year part-time course are to provide participants with a better knowledge of the law and arbitration including the Arbitration Acts of 1954 and 1980. It has been developed at the request of and in co-operation with the Irish Branch of the Chartered Institute of Arbitrators. Normally this course runs on alternate years. It is expected that it will again be provided in 1995/96.

Entrance  
Requirements

Relevant professional qualification (e.g. Law, Engineering Architecture, Surveying, Accountancy, Insurance etc.) with exemptions from modules (a) and (b) for practising lawyers and those with a recognised law degree. Exceptionally, applications will be accepted from unqualified students who have appropriate training or experience. Selection will be subject to interview. Exempted students will be deemed to enrol in course B5A.

Course of Study

*The course comprises three taught modules and two seminars. The taught modules are:*

(a) Legal Principles, Civil Procedure & Evidence (b) Contract & Tort and (c) Arbitration Law & Procedure, Alternative Methods of Dispute Resolution. The two seminars which are organised by the Irish Branch of the Chartered Institute of Arbitrators deal with: (i) Introduction to Arbitration and (ii) ADR and Award Writing. They are subject to a separate fee payable to the Irish Branch of the Institute.





Examinations  
& Awards

On successful completion of course students will be awarded the Dublin Institute of Technology Graduate Diploma in Arbitration Law. It is intended to seek exemption for holders of this Diploma from Parts I and II of the examinations of the Chartered Institute of Arbitrators

Course fee £900

**Department in Charge: Surveying & Building Technology**

**B6**

### GRADUATE DIPLOMA IN INTERNATIONAL ARBITRATION LAW

The objectives of this one year part-time course are to provide a better knowledge of the practice of international arbitration law and procedures. It has been developed at the request of and in co-operation with the Irish Branch of the Chartered Institute of Arbitrators and will next be offered in the 1994/95 session.

Entrance  
Requirements

Application will be open to those holding the DIT Diploma in Arbitration Law, Fellows of the Chartered Institute of Arbitrators and those who have passed Parts I and II of the examinations of that Institute. Selection will be subject to interview.

Course of  
Study

The course comprises two taught modules and four special seminars. The taught modules are:  
(a) Comparative Law & Procedure; (b) International Arbitration, Practice & Procedure. The special intensive two day seminars are led and directed by visiting specialist lecturers and are organised by the Irish branch of the Chartered Institute of Arbitrators.

Examinations  
& Awards

On successful completion of the course students will be awarded the Dublin Institute of Technology Graduate Diploma in International Arbitration Law.

Course fee £600

**Department in Charge: Surveying & Building Technology.**



**B7**

### GRADUATE DIPLOMA IN PLANNING AND DEVELOPMENT ECONOMICS

The objective of this part-time post-graduate course, which extends over two academic years, is to meet the educational requirements for practice as a Planning and Development Surveyor. The first year of this course will next be offered in the 1994/95 session.

Entrance  
Requirements

- (1) (a) a recognised professional qualification in the fields of Planning, Architecture, Surveying, Engineering, Law, Accountancy  
or  
(b) an Honours Degree in an appropriate discipline viz. Surveying, Economics, Law, Geography, Business Studies. and
- (2) Employment in, or evidence of appropriate post-certification work experience in the Built Environment field.

Course of  
Study

*The course consists of two parts:*

Part I subjects are Valuations, Law, Urban Land Economics, Taxation and Rating, Building Technology and Management, and Principles and Techniques of Planning.

Part II consists of one integrated subject area containing a number of elements under the general title 'Planning and Development Policies. Practice and Procedures'.

Examinations  
& Awards

Part I examinations in the subjects listed above will be held at the end of Year 1. Part II examinations will be held and a major planning and development case study presented at the end of Year II.

On successful completion of the course, students are expected to qualify for the award of a Dublin Institute of Technology Graduate Diploma in Land Use Economics. Exemption will be sought for holders of this Diploma from the Part II and III examinations of the Planning and Development Division of the Royal Institution of Chartered Surveyors.

Course fee £850

**Department in Charge: Surveying & Building Technology.**





### SHORT COURSES

Short Courses in aspects of Building, Project Management and Computer Applications may be held during the session. Enquiries relating to these will be welcomed by the Department of Surveying and Building Technology.

**Department in Charge Surveying and Building Technology.**

B40

### FOUNDATION COURSE FOR DEGREE IN ENGINEERING

The Department of Engineering Technology will offer a four year course leading to a Diploma/Degree in Engineering on a part-time basis commencing in September 1995. It is open to those who already hold an appropriate Technician Diploma qualification.

In the 1994/95 session the Department will offer the Foundation Year (or first year) Course for applicants who possess a Technician Diploma at Merit or Pass level. Applicants with a Distinction in their Diploma will be allowed entry to the second year commencing September 1995.

Following the Foundation Course students will complete three years on a Part-time basis with the object of achieving the qualification of Diploma/Degree in Engineering

Course fee

£330

**Department in Charge: Engineering Technology**

B41

### GRADUATE COURSES IN ENGINEERING

This is a day and/or evening course to prepare students for the Part II examinations of Professional Engineering Bodies including:-

- (i) Institution of Engineers of Ireland.
- (ii) The Engineering Council (UK) and its associated Professional Bodies such as:—



- (a) The Institution of Mechanical Engineers;
- (b) The Institution of Electrical Engineers;
- (c) The Institution of Structural Engineers;
- (d) Chartered Institute of Building Services Engineers.

Courses are offered for subjects in the Part II stage provided there are sufficient applicants of a suitable educational standard.

Depending on demand, the following Part II subjects may be offered: The Engineer in Society, Mechanics of Solids, Materials, Structural Analysis, Structural Design, Thermodynamics, Fuel and Energy, Geotechnical Engineering and possibly other subjects. Students are required to complete a Laboratory Programme as part of this course.

Details of the syllabus and examination regulations are available from the Institution of Engineers of Ireland, 22 Clyde Road, Dublin 4.

Entrance  
Requirements

Before entry, applicants must meet the requirements of the appropriate institution for student membership. They are urged to make early applications to the Institutions because it may take several months to process and it is not possible to sit the examinations until this has been completed.

The requirement for student membership of the Institute of Engineers of Ireland is Leaving Certificate with Honours or GCE Advanced Level in Mathematics and a suitable Science subject together with four Ordinary Level subjects including English.

Certain Technician qualifications also meet the educational requirements for student membership and may give exemption from all or some subjects in Part I. Details are available from the Department of Engineering Technology

Course fee

£330

**Department in Charge: Engineering Technology**





B43D/B43E

## MECHANICAL ENGINEERING TECHNICIAN CERTIFICATE AND DIPLOMA COURSE

This part-time day and/or evening course prepares students for a Technician Certificate/Diploma in Mechanical Engineering. Students are expected to be already suitably employed in Mechanical Engineering before commencing the course. It parallels the corresponding wholetime course DT 128 and follows the same core syllabus.

Entrance  
Requirements

Leaving Certificate or equivalent with passes in Mathematics, a Science subject (preferably Physics), English, and two other subjects or a Senior Trade Certificate with suitable endorsement subjects.

Course of  
Study

Stage I — First and Second Year—Subjects: Mathematics, Engineering Science, Mechanics, Drawing, Instrumentation and Materials, Workshop Technology, Complementary Studies and Computing.

Stage II—Third and Fourth Years (Certificate Stage): At this stage three options are offered: Mechanical, Welding and Fluid Power. Common Subjects: Mathematics, Thermal and Fluid Plant, Electrotechnology and Industrial Instrumentation, Complementary Studies and Computing.

Stage III—Fifth and Sixth Years (Diploma Stage) This stage offers options in Municipal Engineering. Candidates are expected to be employed and gaining suitable experience in the appropriate field and are required to have passed the Certificate Stage with Credit, or have one years suitable experience together with a Pass Certificate.

**Municipal Option:** Mathematics, Road Engineering, Management Studies, Planning and Building Regulations, Hydraulics and Sanitary Services, Structural Design and a Project.

(Structural Option): Mathematics, Management Studies, Theory of Structures, Structural Design (Concrete), Structural Design (Steel), Municipal Engineering and a Project.



**Environmental Option:** Mathematics, Management Studies, Road Engineering, Sanitary Services, Waste Management, Environmental Impact Assessment, Environmental Studies (Environmental Economics, Ecology, Air and Water Pollution), Environmental Law and Planning and Building Regulations and a Project.

A number of subjects in the various options are taken in common, particularly in the fifth year.

The Environmental Option will commence in the academic year 1995/96.

Examinations  
and Other  
Requirements

At the end of each session students take a College examination which is moderated by the National Council for Educational Awards and the Dublin Institute of Technology.

Recognition by  
Professional  
Bodies

Those who have successfully completed the Certificate Stage of the course meet the academic requirements for Technician status with the Institution of Engineers of Ireland, while those who have completed the Diploma stage meet the Technician Engineer level and can qualify for the non-Corporate Associateship grade of Membership after they have completed a suitable period of practical training.

Course fee

Stage I	£330
Stage II & III	£230

**Department in Charge: Engineering Technology**



## B45D/B45E

MECHANICAL ENGINEERING TECHNICIAN  
CERTIFICATE AND DIPLOMA COURSE

This part-time day and/or evening course prepares students for a Technician Certificate/Diploma in Mechanical Engineering. Students are expected to be already suitably employed in Mechanical Engineering before commencing the course. It parallels the corresponding wholetime course DT 128 and follows the same core syllabus.

Entrance  
Requirements

Leaving Certificate or equivalent with passes in Mathematics, a Science subject (preferably Physics), English, and two other subjects or a Senior Trade Certificate with suitable endorsement subjects.

## Course of Study

*Stage I* - First and Second Year—Subjects: Mathematics, Engineering Science, Mechanics, Drawing, Instrumentation and Materials, Workshop Technology, Complementary Studies and Computing.

*Stage 11* - Third and Fourth Years (Certificate Stage): At this stage three options are offered: Mechanical, Welding and Fluid Power.

**Common Subjects:** Mathematics, Thermal and Fluid Plant, Electrotechnology and Industrial Instrumentation, Complementary Studies and Computing.

**Mechanical Option:** Mechanics, Design and Engineering Materials, Manufacturing Technology and Design (years work).

**Welding Option:** Design and Materials, Welding Technology, and Welding Inspection.

**Fluid Power Option:** Fluid Power 1, Fluid Power Systems, and Machine Controls.

*Stage 111* - Fifth and Sixth Years (Diploma Stage) At this stage an Instrumentation Option is offered on a part-time basis at present and candidates are expected to be employed in this field. Subjects: Mathematics, Management Studies, Electrotechnology and Electronics, Control Engineering, Industrial Instrumentation, Design, and Project Work together with either Mechanics and Manufacturing Design or Material Science and Process Plant Design and Management.

Examinations  
and Other  
Requirements

Candidates are required to have passed the Certificate Stage with Credit (Merit) or to have at least one year's suitable experience together with a Pass Certificate.

Recognition by  
Professional  
Bodies

At the end of each session students take a College examination which is moderated by the National Council for Educational Awards and the Dublin Institute of Technology.

Those who have successfully completed the Certificate Stage of this course meet the academic requirements for Technician status with the Institution of Engineers of Ireland, while those who have completed the Diploma stage meet the Technician Engineer level and can qualify for the non-Corporate Associateship grade of Membership after they have completed a suitable period of practical training.

## Course fee

Stage I	£330
Stage II & III	£230

**Department in Charge: Engineering Technology.**

## B44D/B44E

BUILDING SERVICES ENGINEERING TECHNICIAN  
CERTIFICATE AND DIPLOMA COURSE

This part-time day and or evening course prepares students for a Technician Certificate/Diploma in Building Services Engineering. Students are expected to be already suitably employed in Building Services Engineering before commencing the course. It parallels the corresponding wholetime Course DT127 and follows the same core syllabus.

Entrance  
Requirements

Leaving Certificate or equivalent with passes in Mathematics, a Science subject (preferably Physics) and two other subjects or a Senior Trade Certificate with suitable endorsement subjects.

## Course of Study

*Stage I - First and Second Years* Subjects: Mathematics, Mechanics, Engineering Science, Drawing, Instrumentation, Building Construction and Services, Complementary Studies and Computing.





*Stage 11 - Third and Fourth Years (Certificate Stage):* At this stage two options are available, Building Services and Refrigeration Technology.

**Common Subjects:** Mathematics, Thermal and Fluid Plant, Electrotechnology and Industrial Instrumentation, Complementary Studies and Computing.

**Building Services Option:** Environmental Engineering, Environmental Plant Design, Lighting, Acoustics and Water Services.

**Refrigeration Technology Option:** Refrigeration Plant, Refrigeration Design, Lighting, Acoustics and Water Services.

*Stage III- Fifth and Sixth Years (Diploma Stage):* Mathematics, Management Studies, Electrotechnology and Controls, Lighting and Acoustics, Environmental Engineering, Air Conditioning and Refrigeration, Heating and Combustion, Computing and a Project.

Course fee	<i>Stage I</i>	£330
	<i>Stage II &amp; III</i>	£230

**Department in Charge: Engineering Technology**

## B47D/B47E

### MECHANICAL ENGINEERING TECHNICIAN COURSE

This part-time day and evening course is intended to prepare students for the City & Guilds of London examinations for Mechanical Engineering Technicians (2550). The course is for technicians and draughtsmen engaged in the following types of employment:

Machine Tool Operation, Jig & Tool Design, Engineering Production and Design Draughtsmen.

Entrance  
Requirements

Elementary Stage Technological Certificate of the Department of Education in Mechanical Engineering or Leaving Certificate or endorsement in Senior Craft Certificate or equivalent.



Course of Study

First Year Workshop Processes and Practice, Engineering Drawing and Materials, Engineering Science, Mathematics, General Studies.

Second Year

Science and Mathematics, Drawing and Materials, Production Technology and General Studies.

Third Year Production Technology, Mathematics and Statistics, Metrology and Management Studies.

Examinations  
and Other  
Requirements

At the end of the first year students take the Part I examination of the City & Guilds of London Institute No. 2550, Part 11 at the end of the second year, and Part 111 at the end of the third year.

Course fee

<i>First Year</i>	£330
<i>Second &amp; Third Year</i>	£230

**Department in Charge: Engineering Technology**

## B48

### CERTIFIED MANUFACTURING TECHNOLOGIST

This course is designed to assist students to prepare for the Manufacturing Engineering Part 1 examination of the Society of Manufacturing Engineers. This leads to the award of Certified Manufacturing Technologist (CMfgT). The course is aimed at technicians, supervisors, production managers and engineers engaged in manufacturing. A further year's study will lead to the award of Certified Manufacturing Engineer (CMfgE).

Entrance  
Requirements

Candidates must have 4 or more years manufacturing engineering experience and suitable education.

Course Content

A review of manufacturing engineering fundamentals including applied mechanics, materials, quality control, management, computer applications, automation, manufacturing processes and engineering design. Duration: One year, two evenings per week.

Course fee

£330

**Department in Charge: Engineering Technology**



B54

**STRUCTURAL DESIGN COURSE**

This is a one year advanced course intended for those who wish to prepare for the Part 111 Design examination of the Institution of Structural Engineers. Depending on demand, there may be options in Steel or Concrete Design.

Entrance  
Requirements

A degree in Civil or Structural Engineering, or a pass in IEL/ Engineering Council examinations, or equivalent, together with at least one year of suitable post-graduate experience in a structural design office.

**Department in Charge: Engineering Technology.**

B57

**INDUSTRIAL MANAGEMENT CERTIFICATE AND DIPLOMA COURSE**

This is a two year evening Certificate course intended for engineering technicians and trainee production and industrial managers who wish to take the certificate examinations of the Institution of Industrial Managers. The Diploma stage is intended primarily for those responsible for discharging management functions.

Entrance  
Requirements

Students entering the Certificate course should have reached the Leaving Certificate standard of general education and be suitably employed as managers or supervisors in industry. Applicants holding an appropriate degree or professional qualification and substantial management experience may be admitted directly into the Third Year of Diploma Stage.

Course of Study

**First Year Subjects:** Production and Operational Management, Industrial Environment, Industrial Management and Organisation, Microelectronics and Data Handling.

**Second Year Subjects:** Production and Operation Management, Industrial Finance, Personnel and Industrial Relations.

**Third Year (Diploma Stage) Subjects:** This involves a further one year period of study of Industrial Management Policy and Practice in which knowledge acquired during the Certificate course is applied to solve practical problems by an integrated approach using case studies, etc.



Examinations  
and Other  
Requirements

Students must pass a College examination at the end of each year. The examination is moderated by the Institution of Industrial Managers. Those who successfully complete the Certificate course qualify for Associate Membership of the Institution of Industrial Managers. Successful students may continue their studies on the one year Diploma course, which leads to Membership grade (MIIM).

Those who enrol are required to apply for student membership

Course fee

<i>First Year</i>	£330
<i>Second Year</i>	£230

**Department in Charge: Engineering Technology**

B58

**REFRIGERATION ENGINEERING TECHNICIAN**

This is a two year course for technicians employed in the refrigeration engineering industry. Suitable students are prepared for the City & Guilds of London Institute examinations in the Science and Technology of Refrigeration (2570). The subjects of instruction are:- Science, Refrigeration Processes and Machinery, and Drawing.

Course fee

£330

**Department in Charge: Engineering Technology.**





B59

**SHORT COURSE PROGRAMME**

A series of 1-5 day short courses on modern developments in Engineering Technology may be organised at different stages during the session. These may include:

- (a) Low Cost Automation;
- (b) Fluid Power;
- (c) Maintenance Management Techniques;
- (d) CAD/CAM
- (e) New Developments in Welding Technology;
- (f) Fuel Technology;
- (g) Fire Safety;
- (h) Structural Design Codes;
- (j) New Materials;
- (k) Water Pollution Control;
- (l) Energy Conservation;
- (m) Engineering Costing and Estimating.

**Department in Charge: Engineering Technology.**

B61

**MAINTENANCE TECHNOLOGY CERTIFICATE COURSE**

This course will provide participants with a knowledge of maintenance strategies and skills to cope with the demands of modern maintenance requirements.

The course is organised on a modular basis and has considerable flexibility for craftspersons and other maintenance staff to enhance their qualifications.

Entrance  
Requirements

Leaving Certificate in five subjects including English and Mathematics, or appropriate Senior Trades Certificate with endorsements or equivalent qualifications or mature applicants. Participants should have at least three years experience performing plant maintenance duties.

Certification

Certification will be provided by the National Council for Educational Awards and the course is offered in the NCEA ACCS mode to allow participants to study for individual subjects, groups of subjects or the entire course programme.



Course of Study

Certification will be provided on a technology option basis. When the requisite technology option and core subjects have been satisfactorily completed the award of National Certificate in Technology, (Maintenance Technology) will be made.

The following technology options and core subjects are initially being offered subject to demand.

**STAGE 1***Common Core Subjects*

Mathematics, Computer Studies, Basic Technology, Maintenance Organisation, Technical Communication

*Fluid Power Technology Option*

Fluid Power Sciences,  
Fluid Power Plant 1  
Refrigeration & Air Conditioning Option  
Basic Heat, Fundamentals of Refrigeration

**STAGE 2**

Common Core Subjects  
Management of Maintenance  
Computer Studies II

*Fluid Power Technology Option*

Fluid Power Science II  
Fluid Power Plant II

Course fee

£330

**Department in Charge: Engineering Technology**

B70

**INTRODUCTORY PROGRAMMING**

This is a one year evening course. Students are prepared for the City & Guilds of London Institute Examinations 726 Information Technology Program. Successful candidates will receive a City & Guilds Certificate in Programming (Level I)

- 7261-212 Introduction to Computers I
- 7261-200 Basic Programming I
- 7261-201 Cobol Programming I



**Course Objective** This course covers the fundamental principles of programming. Computers systems in general are covered and the students are introduced to computer application packages in addition to BASIC and COBOL languages.

**Course of Study**

- Databases
- Computer Systems
- Spreadsheets
- Wordprocessing
- BASIC Language
- COBOL Language

**Entrance Requirements** Leaving Certificate or Equivalent

Timetable	DAY	TIME	ROOM
	Wednesday	6.30 - 9.30 p.m.	380
	Monday	6.30 - 9.30 p.m.	380

**Duration** One year, two evenings per week, Monday and Wednesday

**Course fee** £330

**Department in Charge: Science Mathematics & Computing**

**B71**

### COMPUTER PROGRAMMING

This is a one year evening course. Students are prepared for the City & Guilds of London Institute Examinations 726 Information Technology Program. Successful candidates of this course will receive a City & Guilds Diploma in Programming (Level 2).

- 7261-212 Introduction to Computers
- 7261-238 Program Design Techniques 2
- 7261-221 COBOL Programming 2
- 7261-224 C Programming 2

**Course Objective** This course provides an extensive coverage of programming, with emphasis on C and COBOL languages. The principles of structured design and dataprocessing are covered.



**Course of Study**

- Introductory Computing
- Structured design
- COBOL
- C
- File/Data Processing

**Entrance Requirements** (a) Leaving Certificate or Equivalent  
(b) B70 Introductory Programming or relevant experience.

**Duration** One Year, two evenings per week, Tuesday and Thursday

**Course fee** £330

**Department in Charge: Science, Mathematics & Computing**

**B72**

### ADVANCED PROGRAMMING

This is a one year evening course. Students are prepared for the City & Guilds of London Institute Examination 425 'Applicants Programming Certificate'.

**Course Objectives** This is an advanced applications programming course enabling the student to design and develop commercial systems using advanced programming and design techniques. This course prepares students for work as a junior programmer.

**Course of Study**

- Program Design
- Structured Programming
- Problem Solving
- Design & Secification Tools
- Fourth Generation Languages
- Databases
- Program Documentation

**Entrance Requirements** (a) Leaving Certificate or Equivalent  
(b) City & Guilds Preliminary Certificate in Applications Programming or equivalent

**Course fee** £330

**Department in Charge: Science, Mathematics & Computing**



**B81****AUTOCAD**

This is a one year evening course. Students are prepared for the City & Guilds of London Institute Examination 4351 'Introduction to AutoCAD'. Successful candidates of this course who have also successfully completed either courses B91 or B92. will receive a City & Guilds Diploma in Computer Applications (Level 2).

**Course Objectives**

To give a thorough knowledge of the important aspects of computer aided design and its associated technologies.

**Course of Study**

- Computer Hardware
- Operating Systems
- AutoCAD
- CAD Concepts
- Drawing Creation & Modification
- Drawing Maintenance
- Hardcopy Generation
- Drawing Management

**Entrance Requirements**

- (a) Leaving Certificate or Equivalent.
- (b) Reference

**Duration**

One Year, one evening per week - Monday

**Course fee**

£330

**Department in Charge: Science, Mathematics & Computing**

**B82****AUTOCAD THREE DIMENSIONAL**

This is a one year evening course. Students are prepared for the City & Guilds of London Institute examination 4353 'Three Dimensional AutoCad and Autolisp Programming. Successful candidates of this course who have also completed either courses B91 or B92 will receive a City & Guilds Diploma in Computer Applications (Level 2)

**Course Objectives**

To enable student to use three dimensional CAD software.

**Course of Study**

- Menu Customisation
- LISP Programming
- Three Dimensional Draughting
- AutoCAD Release 12
- Autolisp

**Entrance Requirements**

- (a) Leaving Certificate or Equivalent.
- (b) Reference
- (c) City & Guilds 4351 Introductory AutoCAD or Equivalent.

**Duration**

One Year, one evening per week, Thursday

**Course fee**

£330

**Department in Charge: Science, Mathematics & Computing**

**B83****AUTOCAD CUSTOMISATION**

This is a one year evening course. Students are prepared for the City & Guilds of London Institute Examination 43s4 AutoCAD Customisation.

**Course Objectives**

To enable student to setup and customise AutoCAD and ancillary equipment.

**Course of Study**

- Customising AutoCAD
- Menu Customisation
- CAD Hardware
- AutoCAD Release 12
- Autolisp

**Entrance Requirements**

- (a) Leaving Certificate or Equivalent
- (b) Reference
- (c) City & Guilds 4351 Introductory AutoCAD or Equivalent

**Duration**

One year, one evening per week (Wednesday)

**Course fee:**

£330

**Department in Charge: Science, Mathematics & Computing**

## B91

### WORDPROCESSING & DTP

This is a one year evening course. Students are prepared for the City & Guilds of London Institute Examinations from the 726 Information Technology Program. Successful candidates of this course and one of B92, B8 1 and B82 courses will receive a City & Guilds Diploma in Computer Applications (Level 2).

- 7261-420 Word Processing 2
- 7261-427 Desktop Publishing 2

Course Objectives

The successful candidate will have competency in the use of wordprocessing and DTP systems.

Course of Study

- Wordprocessing
- Desktop publishing
- Documents Preparation
- Computer Hardware
- Computer Software

Entrance Requirements

Leaving Certificate or Equivalent.

Course fee

£230

**Department in Charge: Science, Mathematics & Computing**

## B92

### DATABASES & SPREADSHEETS

This is a one year evening course. Students are prepared for the City & Guilds of London Institute Examinations from the 726 Information Technology Program. Successful candidate B91, B81 and B82 courses will receive a City & Guilds Diploma in Computer Applications (Level 2).

- 7261-421 Databases 2
- 7261-422 Spreadsheets 2

Course Objectives

The successful candidate will have competency in the use of spreadsheet and database systems.

Course of Study

- Databases
- Spreadsheets
- Data Management
- Computer Hardware
- Computer Software

Entrance Requirements

Leaving Certificate or Equivalent

Course fee

£230

**Department in Charge: Science, Mathematics & Computing**

Application procedure for all computing Courses B70 - B92 (incl.)

1. Complete fully Application Form available on request.
2. Enclose certified copy of Leaving Certificate or Equivalent.
3. Postal applications must be received before 16 September 1994.

Fees are only payable on enrolment - no fees should be with your application form. Applicants may be called for interview. Selection will be based upon academic ability. Where vacancies remain on courses, applications must be made in person after the closing date.



## CRAFT & TRADE RELATED COURSES-EVENING

Enquirers seeking further information about trade and trade related courses should contact Departments as follows:

**Construction Trades 'A'** B102, B104, B106, B300

**Construction Trades 'B'** B107, B111, B118, B119, B120, B121, B122A, B122B

**Metal Fabrication & Plumbing** B123, B123A, B123B, B123D, B123E, B125B, B129A, B129B, B130B, B131, B132, B133, B134, B135, B136, B137

**Engineering Trades** B138, B139, B140, B141A-F

**Transport Engineering** B150, B151, B152, B153, B154, B155, B156A, B165, B168, B170, B173A, B173B, B173C, B174, B176, B177, B178A, B178B, B179

**Printing and Graphic Communications** B180, B182, B183, B184, B185, B186, B187, B188, B191, B192, B194, B197, B200

## B104

## COLOUR AND DESIGN IN BUILDING WORK

This course is designed to give craftspersons an opportunity to study colour, texture and pattern and broken colour work in Building.

Duration

One year-30 weeks at 5 hours per week

Course Content

The effects of colour, light, pattern and texture on architectural form and character.

Entry Requirements

Senior Trade Certificate of the Department of Education in an appropriate trade or an equivalent qualification.

Award

City and Guilds of London Institute Certificate 6000-1-09 and 6000-1-5

Course fee

£330

## B106

## SIGNWORK—ADVANCED

This course is intended to give painting and decorating craftspersons an opportunity to improve their knowledge and skill in the preparation of signwork.

Duration

One year - 30 weeks at 5 hours per week - Part 1.  
One year - 30 weeks at 5 hours per week—Part 2.

Course Content

Design, shape and form in signwork. Production of signs, Glass Gilding and Etching, Ornamental Gilding, Silk Screening.

Course fee

£230

## B300

## BUILDING MAINTENANCE (MODULAR)

The course is designed to prepare students for corporate membership of the Institute of Maintenance and Building Management and to equip them with additional skills for employment and career development.

Entrance Requirement

(a) Employment in the Construction/Maintenance Industry  
(b) Interview

## B102

## DECORATIVE PLASTERWORK

The course is designed to provide the participants with the necessary knowledge and skills to produce and fix decorative plasterwork to various dimensions and designs.

Course Content

Squeeze making; Profile preparation and production; Running moulds; Casting and fixing cornices; Designing and casting centre pieces; Rubber mould production; In-situ cornices; Repairs to existing plasterwork.

Entrance Requirements

Knowledge of Plastering and Construction

Course Duration

30 weeks at 3 hours per week

Course fee

£230



Course of Study	This is a part-time modular course which offers programmes at Certificate and Diploma level. The purpose of the Certificate Programme is to re-introduce students to a course of study at a level which meets their needs and to provide a pre-entry qualification for the Diploma programme.
Certificate Programme	Modules include Corrective and Preventative Maintenance, Finance and Costing (two modules), Communication Techniques, Health, Safety and Welfare at Work, Law of Contract.
Diploma Programme	Modules include Maintenance of Buildings, Planning and Management, Personnel and Industrial Relations, Finance and Costings, Legal and Contractual Responsibilities, Marketing and Sales, Improved Methods of Materials Support.
Services	Classes are held in the evening from 6 - 9 pm and average 36 hours per module. A Continuing Professional Development (CPD) Certificate will be awarded to students who successfully complete individual modules.
Course fee	£140 per module

<b>B107</b>	<b>FURNITURE DESIGN AND CONSTRUCTION (ADVANCED)</b>
	This course is designed to give those in the furniture industry an opportunity to study the various aspects of the industry from preliminary sketch drawings to completed design and prepare for positions of responsibility in the industry.
Course Contents	Sketching and draughtsmanship, Sketch Design, Working Drawings, Presentation Drawings.
Entrance Requirements	Employment in furniture industry and/or City and Guilds of London Furniture Craft Studies Certificate.
Examinations	City and Guilds of London Institute.
Awards	City and Guilds of London Certificate in Furniture Design and Construction. Course 5790.
Duration	Two years—30 weeks at 4 hours/week (2 evenings) each year.
Course fee	£230



<b>B111</b>	<b>CABINETMAKING/CHAIRMAKING</b>
	This course is designed to assist students in preparing for the Senior Trade Certificate Examination of the Department of Education and the Advanced Certificates of the City & Guilds of London Institute.
Duration	One year, two evenings per week.
Subjects	Practical, Trade Theory & Drawing.
Entry Requirements	Prospective students must have completed 3 years of apprenticeship and hold the Department of Education Junior Trade Certificate.
Course fee	£330

<b>B117</b>	<b>WOODTURNING</b>
	This course is of 10 weeks duration and covers the basics of woodturning. Students attend classes one evening per week
Course fee	£100

<b>B118</b>	<b>TIMBER TECHNOLOGY (INSTITUTE OF WOOD SCIENCE-CERTIFICATE COURSE)</b>
	The aim of the Institute of Wood Science is to advance and encourage the scientific, technical, practical and general knowledge of timber and wood based materials.
	This course of study is designed to satisfy that aim, providing a focused training programme for those involved with either the growth, utilisation, sale or treatment of timber and timber Products.
Course outline	The course prepares participants for the Institute of Wood Science Certificate level examination, is modular in design and comprises five modules:





Module 1 Wood as a Material  
 Module 2 Timber Trading  
 Module 3 Drying and Strength  
 Module 4 Conversion and Preservation  
 Module 5 Panel Products and Utilisation

Duration	The course will be delivered on two evenings per week and will run for 26 weeks.
Entry Requirements	Mature students will be accepted on the basis of relevant experience and/or interview. New school leavers will be accepted provided they hold a minimum of grade B in a relevant subject in the Intermediate/Junior Certificate and will be subject to interview. They are however encouraged to gain 12 months trade experience before application).
Qualification	Successful participants are rewarded with an internationally recognised professional qualification in timber technology, membership of the Institute of Wood Science at certificate level, and may use the letters CM IWSc.
Course fee	£330

## B119

### BUILDING TECHNOLOGY

This is a three year evening course in Building Construction and associated subjects in preparation for the Department of Education technological examinations.

Duration	3 years - 3 evenings per week.
Objectives	Elementary level examination at the end of the first year. Intermediate level examination at the end of the second year.  Advanced level examination at the end of the third year. Employment in the Construction Industry and possession of a Group or Intermediate Certificate with a Grade C in Mathematics and Mechanical Drawing, or better.
Entry Requirements	



Exemption from First Year of the Course may be granted to an applicant who has achieved an acceptable level in Drawing and Building Subjects. Success in the Elementary Stage Examination is a requirement for entry into the Second Year of the Course.

Success in the Intermediate Stage Examination is a requirement for entry into the Final Year of the Course.

## Subjects

### 1st Year

Building Construction, Mathematics and Geometry.

### 2nd Year

Building Construction, Builders Quantities, Land Surveying and Setting-out, Plane and Solid Geometry.

### 3rd Year

Building Construction, Builders Quantities, Plane and Solid Geometry.

Course fee	<i>First Year</i>	£330
	<i>Second &amp; Third Year</i>	£230

## B120

### CRAFT TECHNICIAN CERTIFICATE COURSE IN BUILDING

This is a three-year part-time course. The course has been designed to enable students on completion of their craft studies to further their career prospects in the Building Industry.

Entry Requirements	Prospective students must have completed at least three years as an apprentice in a recognised building trade and hold a Department of Education Senior Trade Certificate or equivalent trade qualifications.
Course of Study	<b>Stage I:</b> Building Construction 1, Building Measurement, Estimating and Costing, Site Supervision and Building Science.

### Stage II:

Building Construction II, Building Quantities and Account Procedures, Surveying & Levelling, Structural Engineering and Site Management.

**Stage III:**

Building Construction III, Building Quantities, Site Surveying and Setting-out, Building Services, Building Materials, Safety Legislation, Elements of Building Law and Human Resource Management.

Award

Craft Based Technician Certificate in Building  
(Dublin Institute of Technology)

Course fee

*First Year* £330  
*Second and Third Year* £230

**B121****CARPENTRY AND JOINERY—ADVANCED**

This course is designed to assist senior apprentices and craftsmen in preparing for the Senior Trade Certificate Examination of the Department of Education and the Advanced Certificate of the City & Guilds of London Institute.

Duration

One year, two evenings per week.

Subjects

Trade Theory, Trade Practice & Drawing.

Entry Requirements

Prospective students must have passed the Junior Trade Certificate Examination in Carpentry and Joinery.

Course fee

£330

**B122A****WOODCUTTING MACHINISTS**

This course is designed to give students an appreciation of the practical use of woodcutting machines to Junior Trade Certificate standard of the Department of Education. Prospective students must be employed in a timber related trade. The course duration is one evening per week over one year.

Course fee

£330

**B122B****WOOD CUTTING MACHINISTS - CNC**

This course is designed to update the skills of Woodcutting Machinists in modern machining techniques including the use of a Computer based Numerically Controlled Router.

Course fee

£100 for 10 weeks

**B123****SHORT COURSES IN WELDING PROCESSES-  
UPDATING OF SKILLS**

Short courses in various aspects of Welding may be held during the session in response to demands from industry. Enquiries should be directed to the Department of Metal Fabrication.

**B123A****METAL ARC AND OXY-ACETYLENE WELDING**

This course is designed to meet the needs of craftspersons and senior apprentices employed in the engineering and allied industries. The course covers manual metal arc and oxy-acetylene welding to EN287 and BS4872 standards on low-carbon steel plates and pipes.

Entrance Requirements:

Employed in one of the engineering or allied trades.

Duration:

One evening per week (7.00pm to 10.00pm) from September to Easter.

Course of Study

Practical manual metal arc and oxy-acetylene welding on low-carbon steel plate and pipe.

Course fee

£230



**B123B****GAS SHIELDED ARC WELDING**

This course is designed to meet the needs of craftspersons and senior apprentices in Engineering and Allied industries in metal arc gas shielded and Tungsten arc gas shielded welding to Asme IX, EN287 and BS4872 tests on stainless steel, low-carbon steel and aluminium.

Entrance Requirements	Employed in one of the engineering or allied trades.
Duration	One evening per week (7.00pm to 10.00pm) from September to Easter.
Course of Study	Practical metal arc gas shielded welding on low-carbon steel and Tungsten arc gas shielded welding on aluminium and stainless steel.
Course fee	£230

**B123C****M.M.A. ADVANCED PLATE AND PIPE WELDING**

This course is designed to meet the needs of craftspersons and senior apprentices in engineering or allied trades in manual metal arc welding to Asme IX, EN287 and BS 4872 tests on low-carbon steel plate and pipe.

Entrance Requirements	Employed in one of the engineering or allied trades.
Duration	One evening per week (7.00pm to 10.00pm) from September to Easter.
Course of Study	Practical manual metal arc welding on low-carbon steel plate and pipe.
Course fee	£230

**B123D****PIPE FABRICATION**

This course is designed to meet the needs of craftspersons and senior apprentices in pipe fabrication and is suitable to those employed in the following areas: pipe fitting, welding, sheetmetal work, metal fabrication.

Entrance Requirements	Employed in an engineering or allied trade area.
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Duration	One evening per week from 7.00pm to 10.00pm for 20 weeks, beginning September/October.
Course of Study	Theory-drawing and practical work on all types of pipe fabrications.
Course fee	£230

**B123E****LIGHT GAUGE FABRICATION**

This course has been designed to meet the needs of people in the engineering and allied industries who wish to gain an understanding and appreciation of the methods of working and joining metals such as copper, low-carbon steel, aluminium and brass.

Entrance Requirements	Employed in the engineering or allied industries.
Duration	One evening per week from 7.00pm to 10.00pm for 20 weeks, beginning September/October.
Course of Study	This course will cover repousse work, hollowing, planishing, raising, metal shrinking/stretching, decorating and double curvature work, moulding, mechanical and thermal joining processes.
Course fee	£230

**B123F****WELDING REPAIR AND MAINTENANCE**

This course is designed to meet the needs of persons in the areas of repair and maintenance welding for the engineering industry. The materials used will be low-carbon steel, stainless steel, aluminium, copper, brass and cast iron joined by the manual metal arc, M.I.G./M.A.G., T.I.G. and oxy-acetylene welding processes.

Entrance Requirements	Employed in the engineering or allied industry with some knowledge and experience of welding.
Duration	One evening per week (7.00pm to 10.00pm) from September to Easter.
Course of Study	Theory of and the practical methods used to repair low-carbon steel, stainless steel, aluminium, copper, brass and cast iron materials.
Course fee	£230

**B125B**

Objective

**ART METAL CASTING**

To introduce Artists and Sculptors and others involved in making statuary and Objets d'Art, to good design practice and the principles involved in casting in Brass, Bronze and Aluminium.

Duration

One evening per week for 8 weeks or other suitable arrangements.

Entrance  
Requirements

Appropriate to those involved in Artistic Work.

Course fee

£100

**B129A****SHEET METAL WORK**

This course is designed to assist Craftsmen to prepare for the Senior Trade Certificate Examinations of the Department of Education or the City and Guilds of London.

Duration

One year, two evenings per week.

Subjects

Trade Theory & Drawing.

Entry  
Requirements

Prospective students must have completed 3 years of apprenticeship and hold the Department of Education Junior Trade Certificate.

Course fee

£330

**B129B****SHEET METAL WORK—UPDATING OF SKILLS**

This course is designed for the Sheetmetal work crafts person who require to update their practical skills.

Duration

Ten weeks, meeting on two evenings per week, Monday and Tuesday 7.00 p.m. to 9.30 p.m.

Course  
Content

The use of numerical controlled Press Brake and Modern Welding Processes as applied to the Sheet Metal Industry.

Entrance:  
Requirements

Employment in the Sheet Metal Industry.

Course fee

£100

**B130****METAL FABRICATION**

This course is designed to assist Senior Apprentices and Craftsmen to prepare for the Senior Trade Certificate Examination of the Department of Education or City and Guilds of London.

Duration

One year, two evenings per week.

Subjects

Trade Theory & Drawing.

Entry  
Requirements:

Prospective apprentices must have completed 3 years of apprenticeship and have passed the Junior Trade Certificate.

Course fee

£330

**B131****PLUMBING**

This course is designed to assist Senior Apprentices and Craftsmen to prepare for the Senior Trade Certificate Examination of the Department of Education.

Duration

One year, two evenings per week.

Subjects

Trade Theory & Drawing.

Entry  
Requirements

Prospective apprentices must have completed 3 years of apprenticeship and have passed the Junior Trade Certificate.

Course fee

£330

**B132****CRAFT TECHNICIAN CERTIFICATE COURSE  
IN PLUMBING**

This three-year course of study has been designed to prepare craftspersons as craft technicians in Plumbing. Attendance is on three evenings per week (or alternatively on one day and one evening per week).

Course of Study

**Stage I:** Hot and Cold Water Systems, Gas Installations, Sanitation and Drainage, Mathematics, Science, Drawing and Design.

**Stage II:** Mathematics, Science, Mechanics of Fluids, Heating Technology, Drawing and Design.

**Stage III:** Origination and Management Techniques, Estimating and Quantities, Heating Technology, Welding Technology, Design Project.





## Entry Requirements

Prospective students must have completed at least three years of an appropriate craft apprenticeship and have successfully completed the Senior Stage of the Department of Education Craft Certificate Examination (Written and Practical) with endorsement where such is offered.

At the end of each stage, students will be required to be successful in a College examination in each subject before proceeding to the next stage. A DIT Craft Technician Certificate will be awarded to students who pass the final (Stage III) examination in all subjects. Students who are successful in the final examination may apply for corporate membership of the Institute of Plumbing and are also eligible for the Engineering Technician status of the Engineering Council.

Course fee £330

## B133 TENDERING AND ESTIMATING PRACTICE (MECHANICAL SERVICES INDUSTRY)

Duration One year - one evening per week.

Subjects Tendering Procedures, Tender Documents, Contracts, Take-Off Practice, Pricing Folder, Labour Rates, Bill of Quantities, Material and Labour Schedules. Presentation of Tender and Estimating Project.

Entry Requirements Department of Education Senior Trade Certificate.

Course fee £230

## B134 HEATING AND PLUMBING MERCHANTS / PROVIDERS COURSE

Duration One year - one evening per week.

Subjects Hot and Cold Water Systems, Heating Systems, Drainage and Sanitation.

Entry Requirements Employed in the Industry.

Course fee £230

## B135

## DOMESTIC HEATING ENGINEERS COURSE

This course is intended for persons employed in the heating industry and will provide a broad technical education and understanding of the principles and techniques involved in heat engineering. The course is run in conjunction with the Institute of Domestic Heating Engineers. Applications for admission to the course should in the first instance be addressed to:

*The Institute of Domestic Heating Engineers  
15 Summerfield, Old Bawn, Tallaght, Dublin 24.*

Entry Requirements

Department of Education Senior Trade Certificate in Plumbing and be employed in the industry.

Duration

Two years, two evenings per week, Monday and Tuesday

Subjects

Heating Technology; Gas Technology; Management Techniques; Tendering and Estimating; Mechanical Services Drafting

## B136

## CRAFT TECHNICIANS CERTIFICATE IN GAS TECHNOLOGY

Students employed in the Gas and Mechanical Services industry are prepared for the D.I.T. Gas Technician Certificate.

Entry Requirements

Department of Education Senior Trades Certificate or, equivalent.

Subjects

Year 1: Mathematics, Science, Drawing, Heating and Hot Water Technology, Construction Technology.  
Year 2: Heating Technology, Gas Distribution, Gas Utilisation, Drawing, Computers.  
Year 3: Management, Gas Distribution, Gas Utilisation, Computer Aided Design.

Course fee

£330

## B137

## EFFICIENT ENERGY PRACTICE

This course has been specifically designed to provide a means of meeting the demand for efficient operation and control of heating and energy using existing processes and installations. It will provide an understanding of several different skills and disciplines required in the control and management of energy.

Entry Requirements	Suitable employment in Engineering, Construction or Building Management.
Duration	One year, one evening per week - September to Easter.
Course fee	£230

### B300

#### BUILDING MAINTENANCE (MODULAR)

The course is designed to prepare students for corporate membership of the Institute of Maintenance and Building Management and to equip them with additional skills for employment and career development.

Entrance Requirements	(a) Employment in the Construction/Maintenance Industry (b) Interview
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Course of Study	This is a part-time modular course which offers programmes at Certificate and Diploma levels. The purpose of the Certificate Programme is to re-introduce students to a course of study at a speed and level which meets their needs and to provide a pre-entry qualification for the Diploma programme.
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Certificate Level Programme	Modules include Corrective and Preventative Maintenance, Finance and Costing (two modules), Communication Techniques, Health, Safety and Welfare at Work, Law of Contract.
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Diploma Level Programme	Modules include Maintenance of Buildings, Planning and Management, Personnel and Industrial Relations, Finance and Costings, Legal and Contractual Responsibilities, Marketing and Sales, Improved Methods of Materials Support.
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Services	Classes are held in the evening from 6 - 9 pm and average 36 hours per module. A Continuing Professional Development (CPD) Certificate will be awarded to students who successfully complete individual modules.
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Course fee	£140 per module
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### B138

#### ENGINEERING QUALITY ASSURANCE

This course provides a background for those who have responsibility for setting specifications for performance in manufacture or service industry and techniques for measuring their achievement.

Objective	The City & Guilds of London Institute Parts I & II, 743 Quality Control Certificate.
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Duration	One year.
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Entrance Qualifications	Craft, Technician, Engineering and Management personnel with suitable background and experience.
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Course fee	£230
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### B139

#### QUALITY ASSURANCE MANAGEMENT

This programme provides further study for those who have completed the City & Guilds 7430 Parts 1 and 2 Certificate and defines the role of management in the supervision of Quality Assurance Principles and Techniques. Particular emphasis will be placed on the Irish market while generally considering new legislation and E.U. directives. Certification is by the Irish Quality Association.

Entry Requirement:	City & Guilds Certificate 7430 Parts 1 and 2. Applications will also be considered from candidates employed in the area with relevant experience.
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Course Duration	One evening per week for the full session.
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Course Content	Quality Legislation and EU Directives; Financial Consideration of Quality; Quality Documentation; Quality Assurance; Practical Problem Solving Techniques and Applications; Case Studies and Site Visits.
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Course fee	£230
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**B140****ENGINEERING SYSTEMS MAINTENANCE**

This course is designed for apprentices, craftpersons and craft based technicians who already have or wish to acquire a competence in General Maintenance Technology and Practice.

**Objective**

City & Guilds of London Institute Part 11- 2140 Certificate in Engineering Systems Maintenance.

Candidates who successfully complete each element will be issued with a record of achievement and will qualify for the Certificate when they have passed the two core subjects and any three of the optional subjects.

**Core Subjects**

General Maintenance Technology. Maintenance Organisation.

**Optional Subjects**

Pneumatics, Hydraulics, Mechanical Power Transmissions, Electrical Systems, Machine Tool Systems Part 3, Plant Installation and Commissioning Part 3.

**Duration**

Each subject will involve attendance of between 1.5 and 3 hours per week.

**Course fee**

£230

**B141****COMPUTER-AIDED ENGINEERING**

A series of short courses for those requiring an understanding of new engineering technologies and their implications - City and Guilds 2302 scheme.

**B141A**

Basic NC/CNC

**B141B**

Basic CAD/CAM.

**B141C**

Basic Robotics

**Course Duration**

10 weeks—one evening per week or an alternate daytime arrangement, depending on demand.

**Entry Requirements**

Applicants should have a suitable engineering background as craftsmen, technicians or other technical positions.

**Course fee**

£100

**B141D****NC/CNC MACHINE SETTING AND OPERATION**

This is a one-year course to prepare mechanical engineering craftpersons for the City & Guilds 2303 Level III Certificate. It provides an introduction to CNC machines and their programming.

**Course fee**

£230

**B141E****NC/CNC—PART PROGRAMMING**

The City & Guilds of London Institute 2303 Level III Certificate.

**Course Content**

Simple operating principles of Numerical Control, Data Storage and Transmission Media, the NC Machine-Axis, and the purpose of a machine datum, the principle of co-ordinate dimensioning, pre Planning for Part Programming, part Programming.

**Course Duration**

One year (one evening per week).

**Entry Requirements**

City and Guilds of London Institute 2303 Certificate (E141A).

**Course fee**

£230

**B141 F****NC/CNC—ADVANCED PART PROGRAMMING**

The City & Guilds of London Institute 2304 Level IV Certificate.

**Course Content**

Planning programming procedures, the efficient use of canned cycles, sub-routines and other facilities on a number of CNC machines, develop programmes using CAD/CAM Packages, consider the implications of Computer-Aided Manufacturing in Industry, produce working parts on CNC Milling, Turning and Wire Eroding Machines.

**Course Duration**

One year (one evening per week).

**Entrance Requirements**

City & Guilds of London Institute 2303 Level III Certificate.

**Course fee**

£230



<b>B142</b>	<b>ENGINEERING CRAFT STUDIES-INSPECTION</b>
Objective	The City & Guilds of London Institute Mechanical Engineering Craft Studies Certificate 2050, Part II and Part III. This course combines both the theoretical and practical aspects, making use of a well equipped metrology laboratory.
Course Duration	Two years (2 evenings per week)
Entry Requirements	Craft apprenticeship, technician or other engineering qualifications.
Course fee	£330

<b>B150</b>	<b>FLIGHT OPERATION OFFICER (DISPATCHER COURSE)</b>
	This course provides instruction for flight operations officers in all operational aspects related to the preparation for commercial flights and the ground monitoring of all flights from a safety and efficiency viewpoint from the ground. It includes flight planning, aircraft loading, flight watch and operational considerations such as weight and runway limitations for the aircraft performance, weather, and ATC procedures.
	The course follows the guidelines of ICAO standardised course 201
Duration	Two years, two evenings per week.
Entrance Requirements	A general knowledge of aviation appropriate to personnel employed in airlines or associated operations.
Course fee	£330

<b>B151</b>	<b>PRODUCTION PLANNING COURSE (I.A.T.A.)</b>
	This course provides instruction for personnel employed in the Planning Departments of the Aeronautical Industry. The course covers Aircraft Organisation and Practice, and Aircraft Operational and Maintenance Planning.



Entrance Requirements	Personnel employed in Planning Departments in the Industry and holders of Part II Examinations of the City & Guilds of London Institute Certificate Course (2580).
Duration	1 year, 2 evenings per week.
Course fee	£330

<b>B152</b>	<b>MAINTENANCE ENGINEERS' LICENCES OF THE DEPARTMENT OF TOURISM &amp; TRANSPORT</b>
B152A	'A' LICENCE—B.A.C.1-11 AC LICENCE
B152B	F27 MARK 050 AND P & W 125 ENGINE
B152C	'A' LICENCE—B737
B152D	'A' LICENCE—B747
B152E	'A' LICENCE—B727
B152G	'C' LICENCE—P & W JT8D
B152H	'C' LICENCE—P & W JT9D
B152J	'C' LICENCE—ROLLS ROYCE SPEY
B152M	'X' LICENCE—INSTRUMENTS
B152N	'X' LICENCE—ELECTRICAL
B152P	'X' LICENCE—RADIO
B152Q	'X' LICENCE—RADIO (RADAR ENDORSEMENT)
B152K	SHORTS 360 AIRCRAFT AND PT6 ENGINE
B152R	'X' LICENCES—AVIONICS
B152S	B 737 CFM 56-3 ENGINE.
B152T	B737—200/300 DIFFERENCES COURSE.
B1 52U	B737—400/500 DIFFERENCES COURSE.
B152V	B767—300 AIR FRAME

Entrance Requirements	The above courses provide instruction for Aircraft Maintenance Engineers wishing to take the appropriate licence examination of the Department of Tourism & Transport The courses are of one year duration requiring attendance on two evenings per week.
Duration	Basic Aeronautical Engineering Certificate in appropriate Category.
Course fee	One year, one or two evenings per week.
	£230



**B153****JET ENGINE OVERHAUL PROCEDURES**

This course provides instruction in Jet Engine design and overhaul procedures.

Entrance  
Requirements

Employment in the Industry.

Duration

1 year, 1 evening per week

Course fee

£230

**B154****AERONAUTICAL ENGINEERING CRAFT STUDIES****Stage 1**

This is a one year course requiring attendance for two evenings (6 hours) weekly per session. The course is designed to prepare students for Part I of the City and Guilds of London Institute Examinations in Aeronautical Engineering Industry

Entrance  
Requirements

Junior or Intermediate Certificate and be employed in the Aeronautical Engineering Industry.

**Stage 2 (Mechanical)**

This one year course is designed to prepare students for Part II of the City & Guilds of London Examinations in Aeronautical Engineering Craft Studies (Course No. 2080). Classes are held on three evenings per week from October to May

Entrance  
Requirements

Part II City & Guilds Aero Engineering Craft Studies or Aeronautical Engineering Occupational Competences.

Course fee

First Year	£330
Second Year	£230

**B155**

B155B  
B155C  
B155D  
B155E  
B155F  
B155G  
B155H  
B155J  
B155K

**BASIC AERONAUTICAL ENGINEERING CERTIFICATES**

AIRFRAMES PRESSURISED (B.A.E.C.2)  
PISTON ENGINES (B.A.E.C.3)  
TURBO—PROP & TURBO—JET ENGINES (B.A.E.C.4)  
HELICOPTERS (LESS ENGINES) (B.A.E.C.5)  
ELECTRICAL (B.A.E.C.6)  
RADIO (B.A.E.C.7)  
INSTRUMENTS (B.A.E.C.8)  
AVIONICS (BAEC 9)  
INSPECTION & REPAIR OF METAL AND COMPOSITES AIRCRAFT STRUCTURES BAEC 10

The above courses are one year duration, requiring attendance for two evenings (6 hours weekly per session) The courses are designed to prepare students for the Basic Aeronautical Engineering Certificate examinations of the Department of Tourism & Transport.

Entrance  
Requirements

Not less than two years employment in the Aeronautical Engineering Industry.

Course fee

£230

**B156A****PRIVATE AIRCRAFT PILOT'S LICENCE**

This course provides instruction in Meteorology, Navigation, Air Legislation, Theory of Flight and Aircraft Limitations, for personnel wishing to take the Department of Tourism & Transport Private Pilots Licence.

Duration of  
Course

1 year, one evening per week

Course fee

£230

**B156B****PRIVATE PILOTS LICENCE (INSTRUMENT RATING)**

This course provides instruction for personnel who already hold a Private Licence and wish to take the Department of Tourism and Transport Private Licence Instrument Rating.

Course Duration

1 year, 1 evening per week.

Course fee

£230

**B165****MOTOR CYCLE MECHANICS**

Objective

The City &amp; Guilds of London Institute Craft Certificate 3890.

Course Duration

2 years of 30 weeks each year, 2 evenings (6 hours) each week.

Subjects

Motor Cycle Technology, Electricity, Electronics, Engineering Science, Mathematics, Technical Drawing, Workshop Practice, General Studies.

Entrance Requirements

Employment as a motor cycle mechanic.

Course fee

£330

**B170****MOTOR VEHICLE PARTS PERSONNEL**

Objective

The City &amp; Guilds of London Institute 3840, Vehicle Parts Personnel, Part 1.

Course fee

£330

**B173A****MOTOR VEHICLE CRAFT STUDIES—  
DIAGNOSTIC TECHNIQUES**

Objective

The City &amp; Guilds of London Institute 3810 Part III.

Course Duration

Four years, 30 weeks each year.

Attendance

Three evenings (9 hours) each week.

Subjects

Diagnostic Techniques (engine), Diagnostic Techniques (transmission), Automatic Gearboxes.

Entrance Qualifications

City &amp; Guilds of London Institute 3810 Part II or equivalent.

Course fee

£330

**B173B****MOTOR VEHICLE CRAFT STUDIES—  
COMPRESSED AIR SYSTEMS;  
C.I. ENGINES; FUEL INJECTION EQUIPMENT**

Objective

The City &amp; Guilds of London Institute 3810 Part III.

Course Duration

One year of 30 weeks.

Attendance

Three evenings (9 hours) each week.

Subjects

Compressed Air Brakes, Compression Ignition Engines, Fuel Injection Equipment, C.I. Engines.

Entrance Qualifications

City &amp; Guilds of London Institute 3810 Part II or equivalent.

Course fee

£330

**B173C****MOTOR VEHICLE CRAFT STUDIES—  
ELECTRICITY/ ELECTRONICS**

Objective

The City &amp; Guilds of London Institute 3810 Part III.

Course Duration

One year of 30 weeks.

Attendance

Three evenings (9 hours) each week.

Subjects

Motor Vehicle Electricity and Motor Vehicle Electronics.

Entrance Qualifications

City &amp; Guilds of London Institute 3810 Part II or equivalent.

Course fee

£230

**B174****AUTO-ENGINEERING TECHNICIANS**

Objective

Department of Education Advanced Motor Car Engineering Technological Certificate and the City &amp; Guilds of London Institute Motor Vehicle Technicians Full Technological Certificate (3900), Parts II and III.





Course Duration	1 year part-time (7 hours) and 2 evenings (6 hours) each week for 38 weeks.
Subjects	Motor Car Engineering, Automobile Electricity/Electronics, Heat Engines, Applied Mechanics, Garage Organisation and Management and Computer Studies.
Entrance Qualifications	Department of Education Senior Trade Certificate with endorsement subjects and Department of Education Intermediate Motor Car Engineering Technological Certificate (2 subjects) or the City & Guilds of London Institute 3900, Part 1.
Course fee	£330

### **B176 AUTOMOBILE ENGINEERING UPDATING COURSES—CONTINUING EDUCATION PROGRAMME**

Objective	Updating of trade personnel in modern developments relating to engines, transmission systems and electronics.
Course Duration	Two days to a few weeks—day and/or evening.
Entry Requirements	Senior Trade Certificate in Motor Engineering.

### **B177 TECHNOLOGICAL CERTIFICATE IN AUTOMOBILE ENGINEERING**

Objective	Department of Education Elementary, Intermediate and Advanced Technological Certificates in Motor Car Engineering.				
Course Duration	5 years of 30 weeks each year, 4 evenings (12 hours) each week.				
Subjects	Motor Car Engineering, Engineering Science and Mathematics, Automobile Electricity, Engineering Laboratory, General Studies including English, Drawing and Sketching, Garage Organisation and Management.				
Entrance Requirements	Junior or Intermediate Certificate with Honours in certain specified subjects.				
Course fee	<table> <tr> <td>First Year</td><td>£330</td></tr> <tr> <td>Second &amp; Third Year</td><td>£230</td></tr> </table>	First Year	£330	Second & Third Year	£230
First Year	£330				
Second & Third Year	£230				



### **B178A**

### **MOTOR INDUSTRY MANAGEMENT CERTIFICATE**

This three year course prepares students for membership examinations of the Institute of the Motor Industry.

Subjects	Motor Industry Management, Motor Industry Law, Motor Industry Administration and Organisation, Accountancy, Computer Studies.	
Entrance Requirements	Leaving Certificate or equivalent qualification. Exemptions to stages of the course may be available to suitably qualified candidates.	
Course fee	<i>First Year</i>	£330
	<i>Second Year</i>	£230

### **B178B**

### **MOTOR INDUSTRY MANAGEMENT HIGHER CERTIFICATE**

This one-year course prepares students for the Higher Certificate of Management of the Institute of the Motor Industry.

Subjects	Management, Legislation, Accountancy, Organisation and administration.
Entrance Requirements	IMI Certificate of Management.
Course fee	£230

### **B179**

### **ROAD TRANSPORT STUDIES**

This three year course prepares students for the membership examinations of the Institute of Road Transport Engineers and Certificate of Professional Competence of the Department of the Environment.

Subjects	Management Supervision and Practice, Financial and Commercial Aspects, Workshop Organisation and Administration, Legal Aspects of Motor Trade and Transport Legislation - Technical and Administrative, Transport Operational Principles, Computer Studies.
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Entrance  
Requirements

The Leaving Certificate or equivalent qualifications. Exemptions from stages of the course may be available to suitably qualified candidates.

Course fee £230

**B180** **BOOK AND ARCHIVE RESTORATION**  
The purpose of this one year course is to train students in the repair and presentation of books, documents, etc. It is of particular value to the staffs of hand bindaries, local record offices and those libraries concerned with the care of manuscripts and archives. Attendance is required on one evening per week. Students will be required to provide some of the materials used.

Course fee £230

**B182** **PRINT FINISHING**  
This one year course covers techniques and materials used in the production of books, magazines, and a wide range of miscellaneous work handled in the print finishing department. Stress is laid on hand and machine operations, e.g., wire stitching, sewing and folding, machine and hand feeding, gathering, glueing and mounting.

Course fee £230

**B183** **INTRODUCTION TO PRINTING TECHNOLOGY**  
A one year course to prepare students for the Introduction to Printing Technology P.E.I./B.P.I.F. examinations to be accepted as a candidate for the following:-  
(a) Estimating examination of the British Printing Industries Federation.  
(b) Printing Office Procedure examination of the British Printing Industries Federation.

Course fee £230



**B184**

**COST ACCOUNTANCY FOR PRINTERS**

A one year course designed to prepare students for the examinations of the British Printing Industries Federation.

Entrance  
Qualifications

Royal Society of Arts Certificate in Accounting and Office Procedure, or equivalent.

Course fee £230

**B185**

**ESTIMATING FOR PRINTERS**

A one year course designed to prepare students for the examination of the British Printing Industries Federation.

Entrance  
Qualifications

Leaving Certificate and Introduction to Printing Technology of the British Printing Industries Federation or equivalent.

Course fee £230

**B186**

**PAPER TECHNOLOGY**

A two-year course for personnel employed in Printing, Paper and Packaging Industries. Students are prepared for the examination of the Institute of Paper.

Entrance  
Qualifications

Leaving Certificate or equivalent.

Course fee £230

**B187**

**DESIGN FOR PRINT**

This is a two year course to give students knowledge/skills in the following subject areas: Basic Design, Copy Preparation, Typographic Design, Printing Processes, Book and Magazine Layout, Advertising Design, Packaging Design, Graphic Design.

Entrance  
Qualifications

Leaving Certificate or Department of Education Senior Certificate in a graphic arts subject or other equivalent qualification.





Course fee	First Year	£330
	Second Year	£230

### **B188 INTRODUCTION TO MANAGMENT (GRAPHIC INDUSTRIES)**

**Course Duration** A one year course to prepare students for the City & Guilds of London Institute Certificate in Introduction to Management (Graphic Industries).

**Entrance Qualifications** Department of Education Senior Trade Certificate in a Printing discipline or an equivalent qualification.

**Course fee** £230

### **B191 BOOKBINDING AND PRINT FINISHING RETRAINING**

This one year evening course for personnel employed in the Printing Industry provides instruction in the latest techniques, and covers the whole range of materials and technology used in print finishing processes.

**Course fee** £230

### **B192 LITHOGRAPHY AND PHOTO-LITHOGRAPHY RETRAINING**

This one year course for personnel employed in the Printing Industry provides instruction in the latest techniques of lithographic plate making and press operation.

**Course fee** £230

### **B193 ADVANCED LITHOGRAPHIC PRINTING AND PLATEMAKING**

**Aims of course** To train students in advanced Lithographic Press Operation.



**Entrance Requirements** Full apprenticeship and / or employment in the industry

**Course Duration** One year, three hours per week

**Course content** Lithographic Press Operations, setting of feeders, delivery, inking and damping units. Single and multiple units. Platemaking techniques: Impositions and planning. Inks and ink mixing. Process colour, Perfecting and C.P.C.

**Course fee** £230

### **B197 DESK TOP PUBLISHING**

This course is for personnel requiring training in Desk Top Publishing. Design is an important feature of the course. A second year course may be available for those wishing to pursue computer aided design.

**Course fee** £330

### **B200 SCREEN PRINTING**

This is a one year course which covers the following topics: Screen Preparation, Printing Techniques, (manual/semi-auto) Single and Multi Colour Work, Materials and Substrates.

**Course fee** £230

The information contained in this booklet is intended as a guide for persons seeking admission to the Institute and is not intended as an element of a contract between the Institute and the student or his/her employer or sponsor. The Institute reserves the right to change or modify any of the courses or the information without prior notice. Applicants are advised to check the details of any course before enrolling for it.





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